

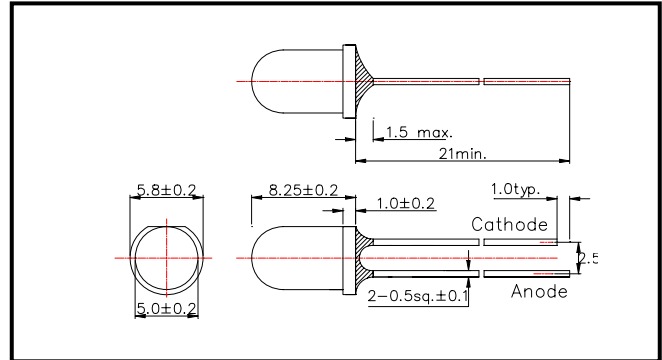
L810-03AU Infrared LED Lamp

L810-03AU is an AlGaAs LED mounted on a lead frame with a clear epoxy lens. On forward bias, it emits a spectral band of radiation, which peaks at 810nm.

◆ Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L810-03AU
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	810nm typ.
4) Package	
(1) Type	Φ5mm clear molding
(2) Resin Material	Epoxy Resin
(3) Lead Frame	Soldered

◆ Outer dimension (Unit : mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	170	mW	$T_a = 25^\circ\text{C}$
Forward Current	I_F	100	mA	$T_a = 25^\circ\text{C}$
Pulse Forward Current	I_{FP}	500	mA	$T_a = 25^\circ\text{C}$
Reverse Voltage	V_R	5	V	$T_a = 25^\circ\text{C}$
Operating Temperature	T_{OPR}	-30 ~ +85	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-30 ~ +100	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	260	$^\circ\text{C}$	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 3 seconds at 260°C

◆ Electro-Optical Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F = 50\text{mA}$		1.60	1.80	V
Reverse Current	I_R	$V_R = 5\text{V}$			10	μA
Total Radiated Power	P_o	$I_F = 50\text{mA}$	16.0	18.0		mW
Radiant Intensity	I_E	$I_F = 50\text{mA}$	40	80		mW/sr
Peak Wavelength	λ_P	$I_F = 50\text{mA}$	790	810	830	nm
Half Width	$\Delta\lambda$	$I_F = 50\text{mA}$		35		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F = 50\text{mA}$		± 15		deg.
Rise Time	t_r	$I_F = 50\text{mA}$		60		ns
Fall Time	t_f	$I_F = 50\text{mA}$		40		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512